



# ICAO ENGINE EXHAUST EMISSIONS DATA SHEET

## SUBSONIC ENGINES

ENGINE IDENTIFICATION: GE90-90B BYPASS RATIO: 8.4  
 UNIQUE ID NUMBER: 3GE060 PRESSURE RATIO ( $\pi_{00}$ ): 39.7  
 COMBUSTOR: DAC I  
 ENGINE TYPE: TF RATED THRUST ( $F_{00}$ ) (kN): 418.1

### REGULATORY DATA

CHARACTERISTIC VALUE:	HC	CO	NO <sub>x</sub>	SMOKE NUMBER
D <sub>p</sub> /F <sub>00</sub> (g/kN) or SN	4.7	58.2	74.6	10.5
AS % OF ORIGINAL LIMIT	24.0	49.3	62.5	65.6
AS % OF CAEP/2 LIMIT (NO <sub>x</sub> )			78.1	
AS % OF CAEP/4 LIMIT (NO <sub>x</sub> )			86.3	
AS % OF CAEP/6 LIMIT (NO <sub>x</sub> )			95.2	
AS % OF CAEP/8 LIMIT (NO <sub>x</sub> )			107.3	

### DATA STATUS

- PRE-REGULATION  
 x CERTIFICATION  
 - REVISED (SEE REMARKS)

### TEST ENGINE STATUS

x NEWLY MANUFACTURED ENGINES  
 - DEDICATED ENGINES TO PRODUCTION STANDARD  
 - OTHER (SEE REMARKS)

### EMISSIONS STATUS

x DATA CORRECTED TO REFERENCE  
 (ANNEX 16 VOLUME II)

### CURRENT ENGINE STATUS

(IN PRODUCTION, IN SERVICE UNLESS OTHERWISE NOTED)  
 x OUT OF PRODUCTION (DATE: - )  
 - OUT OF SERVICE (DATE: - )

### MEASURED DATA

MODE	POWER SETTING (%F <sub>00</sub> )	TIME (minutes)	FUEL FLOW (kg/s)	EMISSIONS INDICES (g/kg)			SMOKE NUMBER
				HC	CO	NO <sub>x</sub>	
TAKE-OFF	100	0.7	3.419	0.08	0.08	57.34	0.0
CLIMB OUT	85	2.2	2.756	0.07	0.11	43.92	0.0
APPROACH	30	4.0	0.884	1.34	23.48	10.62	0.0
IDLE	7	26.0	0.313	2.77	35.79	6.11	9.4
LTO TOTAL FUEL (kg) or EMISSIONS (g)			1208	1674	22509	29448	-
NUMBER OF ENGINES				3	3	3	3
NUMBER OF TESTS				3	3	3	3
AVERAGE D <sub>p</sub> /F <sub>00</sub> (g/kN) or AVERAGE SN (MAX)				4.0	53.8	70.4	9.5
SIGMA (D <sub>p</sub> /F <sub>00</sub> in g/kN, or SN)							
RANGE (D <sub>p</sub> /F <sub>00</sub> in g/kN, or SN)				3.82-4.22	51-55.7	69.1-73	9-9.5

### ACCESSORY LOADS

POWER EXTRACTION 0 (kW) AT - POWER SETTINGS  
 STAGE BLEED 0 (% CORE FLOW) AT - POWER SETTINGS

### ATMOSPHERIC CONDITIONS

BAROMETER (kPa)	97.4-98.6
TEMPERATURE (K)	274-299
ABS HUMIDITY (kg/kg)	0.001-0.0073

### FUEL

SPEC	Jet A
H/C	1.94
AROM (%)	17.2

MANUFACTURER: General Electric Company  
 TEST ORGANIZATION: GE90 Eval Engineering  
 TEST LOCATION: Site IVD & 6, PTO, Peebles, Ohio  
 TEST DATES: 24/02/1995-28/07/1995

### REMARKS

1. GE Report TM95-17.
2. Engine S/N 704/223 & 704/234
3. DAC I combustor

Compliance with Fuel Venting requirements: - ('x' if complies, 'PR' if pre-regulation, '-' if information is not available)